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Application S/N 10/511478
Response to Office Action Dated 12/20/2006

REMARKS

Applicants corrected typographical mistakes in the specification and amended claim 1. By amending claim 1, Applicants did not add new matter; support in the originally filed specification for the barrier layer being on an internal wall surface of the sound window is given on pages 3, lines 26-28 and page 5, lines 23-24; support for the barrier layer preventing permeation and maintaining pressure is given on page 7, lines 20-27; support for the barrier layer being polymerized is given on page 3, lines 26-28. Claim 2 is canceled. Claims 1, 3-8 are pending.

The Examiner objected to the specification because of a misspelling on page 7 of the specification. Applicants have corrected this and other misspellings in the specification.

Applicants traverse the Examiner's rejection of claim 1 as being anticipated by U.S. Patent No. 5,715,825 to Crowley et al. (Crowley '825), of claim 2 as being obvious over Crowley '825, of claims 3, 4, 5 over Crowley '825 and Abe (JP 2002078653) (Abe '653), of claims 6 and 7 over Crowley '825 and U.S. Patent No. 5,469,853 to Law (Law '853), and of claim 8 over Crowley '825 and U.S. Patent No. 5,640,961 to Verdonk (Verdonk '961).

Crowley '825 teaches an acoustic imaging catheter, the sheath 12 of which the Examiner likens to the barrier on an internal wall surface of the sound window, as required by claim 1. Applicants assert that the sheath cannot be compared to be a barrier on an internal wall surface because the sheath of Crowley '825 serves a very different purpose. Unlike the claimed barrier on an internal wall surface of the sound window that maintains pressure inside the sound window and makes the sound window impermeable to liquid and gases, the sheath 12 of Crowley '825 is not intended to be placed on the inside because it: (a) is disposable (column 10, line 27); (b) is intended to be twisted (column 11, line 35); (c) imposes a dynamic viscous drag (column 14, lines 46-47); (d) is configured so that fluids pass through it (column 16, line 16); (e) contains air bubbles (column 18, lines 44-45); and (f) may be used to apply pressure and/or heat (column 20, line 34), etc. Quite simply, the sheath cannot be compared to the internal barrier as claimed because the very purpose of Crowley '825's sheath is to accommodate different environmental conditions, pressures, and uses whereas the internal barrier is intended to protect the sound window from these different environmental conditions

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and uses. The Examiner suggests that placement of Crowley '825's sheath on the inside of the sound window is an obvious modification. Placing the sheath on the inside of the sound window, however, would completely undermine and/or destroy the functions of the sheath as taught by Crowley '825.

The combination of the Abe '673 and Crowley '825 is not suggested by either reference, a necessary condition to sustain a prima facie case of obviousness, because their combination would destroy the function of both. Abe '673's teaching of using a resin in a lumen or as an enveloping layer [¶0078] is contrary to using the sheath 12 of Crowley '825. Abe '673 teaches that the resin does not allow the permeability of fluids and can be sterilized and used repeatedly. Crowley '825 teaches its sheath is disposable, does allow the exchange of fluids, and does permit the pressure within the sound window to change. Thus, the disparity of their functions teaches against their combination. Applicants request the Examiner to withdraw the rejection of claims 3-5 over the combination of Crowley '825 and Abe '673.

Similarly, Law '853 and Crowley '825 cannot be combined to sustain a prima facie case of obviousness. Law '853 teaches a rigid sheath (column 18, line 53) and a thin membrane intended to be broken (column 35, line 11-14). Crowley '825, of necessity, teaches a flexible sheath to accommodate a variety of environment conditions. Their combination is not suggested by either reference and, as above, their combination is not possible: one reference teaches a rigid sheath, the other teaches a flexible sheath. In addition, the combination would not teach Applicants' claimed invention of an internal and impermeable barrier on the inside of a sound window.

Applicants further traverse the rejection of claim 8 over Crowley '825 with Verdonk '961. Crowley '825 has been discussed above; Verdonk '961 does not provide complementary teachings. Verdonk '961 teaches a sheath having two layers but specifically states that the purpose of the sheath, no matter how many layers, is to provide mechanical support to the drive cable so that it doesn't knot and can be guided along a tortuous path and second, to protect the delicate intimal layer of the artery (column 8, lines 3-8). The internal barrier layer as claimed by Applicants maintains pressure inside a sound window and creates an impermeable barrier for the sound window. None of these claimed properties are suggested

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or taught by Crowley '825 in combination with Verdonk '961. Applicants request the Examiner to withdraw the rejection of claim 8.

The Examiner is requested to pass the case to issuance. If any further matters remain that can be easily resolved, please telephone the attorney below.



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Respectfully submitted,

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